

REMARKS

In the Final Office Action, claims 8-10, 13 and 14 are rejected under 35 USC 130(a) over Moraillon in view of Stark. All of the claims in this rejection are ultimately dependent from claim 8. Further, claims 15-18 are rejected under 35 USC 130(a) over Stark in view of Moraillon. All of the claims in this rejection are ultimately dependent from claim 15.

Each independent claim 8 and 15 recites that two *subsets of groups* of photosensors (in Figure 2, for example, each group 10 of photosensors includes photosensors 12a, 12b, 12c, 12d) are interleaved along a linear array. Each group 10 is operable in a first or second mode. This annotated version of Figure 2 as filed shows, in the embodiment, how, in the first mode, a group of four photosensors, such as indicated as 10, can be caused to operate as a single photosensor; and in a second mode, individual photosensors such as 12a and 12b *within* each group can independently output signals to output lines such as V_{ido} and V_{ide} in Figure 2.

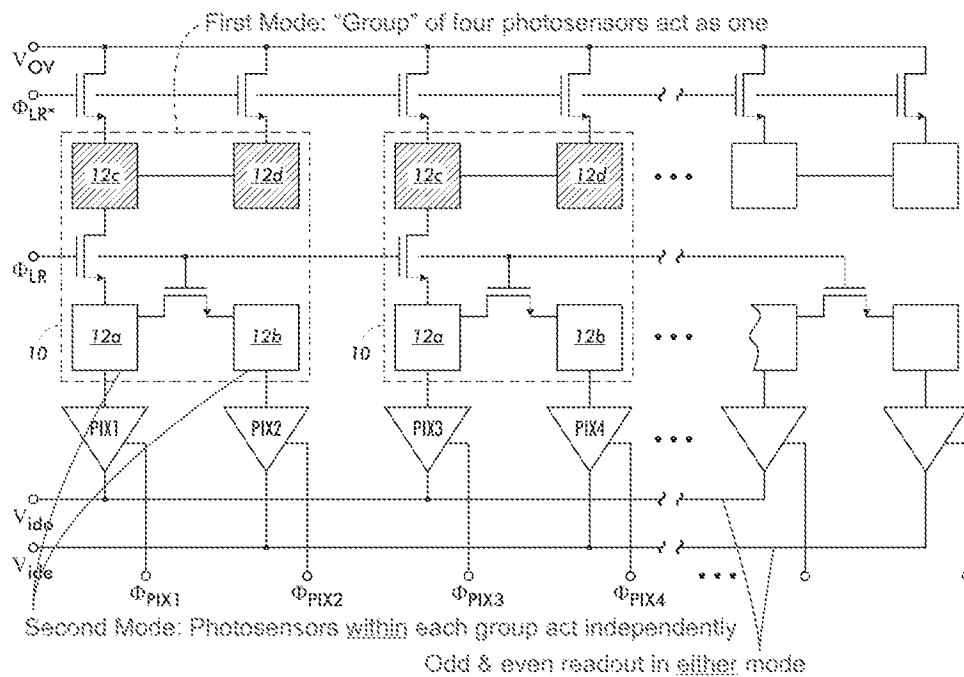


FIG. 2

Further as recited in claim 8 and claim 15, in the first mode or the second mode, **signals from adjacent photosensors or groups of photosensors on the first and second output lines overlap over time.** By this is meant the apparatus outputs at least two “trains” of signals, corresponding to adjacent “odd” or “even” photosensors 12 or groups of photosensors 10. As explained in the Specification as filed at paragraph 0025, with the claimed invention, the two-line, odd-even arrangement **remains in place** in **either mode**, when either *groups* of photosensors 10, or *individual* photosensors 12 *within* each group 10, are read out. **This** capability is captured by the last clause of claim 8 and claim 15, and is not remotely suggested by either reference.

Turning to the Moraillon reference, while there is a general discussion of an upper register 12 and a lower register 13 operative of a two-dimensional CCD, and the respective columns of operated CCD photosite locations are arguably “odd” and “even,” there is no disclosure or suggestion in the reference of the idea of being able to change the effective resolution of the apparatus, such as with the photosensors and groups of photosensors of the claimed invention. As pointed out in the rejection, Moraillon does not teach the “first and second modes,” as recited in claims 8 and 15.

Turning to the Stark reference, the most relevant teaching is at paragraphs 0090 to 0095, a discussion of the “interlace mode.” It is clear that the interlace mode of Stark is not the same as the “two-line, odd-even” arrangement of the claim. While Stark uses the odd-even language, Stark is really talking about taking two *complete*, but half-resolution, pictures (“frames” or “fields”) of an image; and reading out *all* of one picture *and then* reading out *all* of the other picture. See paragraphs 0095-0096 of Stark (emphases added):

For the odd field, the charges from two vertically adjacent unit cells 40 and 42 in lines R1 and R2 are combined (as noted by the dashed box around them) and simultaneously transferred to the sense amplifier for that column, SA₁, in a manner similar to that described with respect to FIG. 1. This is true for all unit cells in lines R1 and R2 This is followed by a similar action for lines R3 and R4, followed by lines R5 and R6, and so on, until the last two lines. * * *
[0096] **The odd field readout is followed by the readout of the even field.**

The even field data *acquisition* [i.e., "taking the picture," NOT the *readout* of the signals] is generally simultaneous with the odd field *readout*.

In Stark, the entire *field* of odd data is read out separately from reading out the field of even data. This is simply not the same as reading out signals from adjacent odd and even photosensors, *one pixel at a time*, so that signals from adjacent (odd, then even) photosensors or groups of photosensors overlap over time, as recited in claim 8 or claim 15.

Each independent claim 8 and 15 recites that, in a first mode, groups of photosensors read out signals as groups onto odd and even lines, and, in a second mode, individual photosensors within a group read out signals onto odd and even lines. Regardless of how the teachings of references are combined, neither Moraillon nor Stark disclose or remotely suggest this capability. Therefore, independent claims 8 and 15 are allowable, along with their respective dependent claims.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he is hereby requested to call the undersigned attorney at (585) 423-3811, Rochester, NY.

Respectfully submitted,

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RH/gm